

REMARKS

This Amendment is in response to the Office action mailed September 30, 2003. By this paper, claim 12 is amended and claims 25-31 are added. Accordingly, claims 1-31 are pending upon entry of this amendment. A check in the amount of \$126 is enclosed to cover the additional claims fee. Applicants also submit herewith a second supplemental information disclosure statement and a check in the amount of \$180 to cover the fee specified in 37 CFR § 1.17(p).

I. Response to Objection to the Drawings

It is respectfully requested that Figure 8 of the drawings in the above-entitled application be replaced with corrected Figure 8 as submitted herewith. As identified by the Examiner, reference character "79" was not mentioned in the description. The amendment involves the correction of replacing reference character "79" with the correct reference character "69". No new matter is added by this amendment.

The Examiner also objected to the drawings because reference character "8" in Figure 7 was not mentioned in the description. Reference character "8" in Figure 7 identifies the section line on Figure 7 from which Figure 8 is taken. Accordingly, Applicants request that the Examiner withdraw the objection to Figure 7.

II. Response to §112 Rejections

Claims 12-24 are rejected under 35 U.S.C. §112, second paragraph as being indefinite because there is insufficient antecedent basis for the limitation "said preselected amount of liquid". Claim 12 has been amended to introduce the limitation

with the indefinite article "a". Accordingly, proper antecedent basis is present in claim 12. This amendment in no way narrows the scope of the claim. Accordingly, claim 12 is believed to satisfy 35 U.S.C. §112, and Applicants request that the rejection of these claims under §112 be withdrawn.

III. Rejection of Claims 1.

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by either U.S. Patent No. 6,221,460 issued to Weber (hereinafter "Weber") or U.S. Patent No. 5,797,892 issued to Glaug et al. (hereinafter "Glaug et al."). Claim 1 is particularly directed to the provision of a wetness indicator to be used with training pants, diapers or the like as a toilet training aid. Upon absorption of urine or other body exudates, the wetness indicator becomes firm or rigid to signal to the wearer that urination has occurred. More particularly, claim 1, is directed to a wetness indicator for alerting a wearer to urination comprising:

a liquid permeable enclosure having a liquid absorbent body therein, said liquid absorbent body absorbing liquid in the presence thereof and applying hydraulic pressure to the enclosure upon absorption of a preselected amount of liquid, said enclosure limiting expansion of the absorbent body so that the wetness indicator stiffens as liquid is absorbed, said wetness indicator having a first stiffness when dry and a second stiffness greater than said first stiffness upon absorption of said preselected amount of liquid.

Claim 1 is unanticipated by and patentable over Weber in that the reference fails to show or suggest a wetness indicator

having a liquid permeable enclosure with a liquid absorbent body therein configured such that the enclosure limits expansion of the absorbent body so that the wetness indicator stiffens as liquid is absorbed.

Weber discloses a liner (12) for use with personal care absorbent articles, such as diapers, designed to provide a path for increased air circulation and also to reduce the total surface area of the liner in contact with the infant's skin. Thus, the liner disclosed by Weber has a totally different purpose than a wetness indicator leading to substantially different structural properties than what is required by claim 1. The liner (12) forms the air-circulation paths by providing a plurality of peaks (48) separated by channels (51) at spaced-apart intervals across the surface of the liner. The peaks (48) are formed by creating pairs of inwardly facing folds (44) and (46) in a facing layer (40). Disposed within the peaks (48) is a liquid absorbing material (50) capable of absorbing body exudates or liquids in general. The absorbing material (50) may include components such as wood pulp, fluff, tissue, superabsorbent particles and fibers, odor reducing agents and antimicrobial agents. The absorbent material (50) is formed in the general shape of the peaks (48) or may be formed in sheet form and then rolled, folded or stacked to fit into the peaks.

However, Weber fails entirely to disclose or suggest that the peaks (48) stiffen as liquid is absorbed in the absorbent material as required by claim 1. The Examiner suggests that the inherent dimensional change of a superabsorbent material would cause such stiffening because the facing layer (40) limits the expansion of the absorbent material through direct bonding to the underlying layer. However, the facing layer would only

cause the peaks to stiffen if the unrestrained saturated volume of the superabsorbent material was greater than the volume within the peak. There is no indication that this is the case as Weber fails to disclose that the amount of absorbent material is such that the facing layer (40) limits the expansion of the absorbent material (50).

It does not appear that the peaks stiffen as liquid is absorbed in the absorbent material, and in fact, it would be highly undesirable to have the peaks become stiff upon absorption of body exudates. In the liner shown in Fig. 1, the peaks run continuously from the front edge of the diaper through the crotch region to the rear edge thereof. If the peaks were to become stiff, they would have the tendency to urge the diaper straighten out. This would cause increased strain on the fasteners and likely cause the fasteners to disengage, permitting the diaper to fall off the wearer. Even if the diaper remains fastened, the displacement might cause leakage. In any case, there is no indication whatsoever that the peaks in the liner taught by Weber have a first stiffness when dry and a second stiffness greater than the first stiffness upon absorption of a preselected amount of liquid such that the wetness indicator could alert the wearer that urination has occurred, as required by claim 1. Accordingly, claim 1 is not anticipated by the cited reference.

Claim 1 is also unanticipated by and patentable over Glaug et al. in that this reference also fails to show or suggest wetness indicator having a liquid permeable enclosure with a liquid absorbent body therein configured such that the enclosure limits expansion of the absorbent body so that the wetness indicator stiffens as liquid is absorbed.

Glaug et al. disclose a toilet training aid in the form of a pad that undergoes a dimensional change upon absorption of body exudates. Glaug et al. describe the dimensional change pad as a compressed cellulose sponge (82) that expands to at least 2 times its dry dimension when exposed to a liquid.

However, Glaug et al. fail entirely to disclose that the sponge stiffens as liquid is absorbed, as required by claim 1. Furthermore, cellulose sponges typically behave in exactly the opposite manner; they are stiff when dry and become more pliable as they absorb liquid. This is supported by statements in Glaug et al., such as, "the dimensional change member may be softened by mechanical means or other suitable techniques so as to be less noticeable until urination occurs." Glaug et al. col. 16, lines 34-37. For example, the sponge may be run through a set of meshed gears so that the material is scored so as to make it pliable. Glaug et al. col. 16, lines 38-41. The Examiner points to this very passage for support that the wetness indicator has a first stiffness when dry and a second stiffness greater than the first stiffness upon absorption of a preselected amount of liquid. However, this passage in no way suggests that the sponge becomes stiffer upon absorption of liquid. To the contrary, this passage explicitly discloses that the sponge is stiff when dry and that it is desirable to make the dry sponge **less** stiff.

The Examiner also suggests the topsheet (52) limits expansion of the absorbent body through its direct bonding to the support layer. However, this is not disclosed by Glaug et al., and contrary to the teaching of having the sponge increase in size (particularly in a thickness direction). Constraining the growth of the sponge therefore would appear to render Glaug

et al. inoperable for its intended purpose. Accordingly, Glaug et al. fail to disclose a wetness indicator having a first stiffness when dry and a second stiffness greater than the first stiffness upon absorption of a preselected amount of liquid such that the wetness indicator could alert the wearer that urination has occurred as required by claim 1.

Accordingly, claim 1 is not anticipated by the cited references and favorable consideration of claim 1 is respectfully requested. Claims 2-11 and 29-30, depending directly or indirectly from claim 1, are submitted as patentable over the cited reference for the same reasons.

New claim 29 requires the unrestrained saturated volume of the liquid absorbent body to be greater than the volume of the liquid permeable enclosure. Weber and Glaug et al. fail to show or suggest the volumetric relationship required by claim 29. Accordingly, claim 29 is submitted as patentable for this additional reason.

New claim 30, depending from claim 1, contains the additional limitation that the second stiffness of the wetness indicator upon absorption of the liquid is at least about five times greater than said first stiffness. Applicants submit that neither Weber nor Glaug et al. disclose such an increase in stiffness. For this additional reason, claim 30 is patentable over the cited art.

IV. Rejection of Claim 12.

Claim 12 was rejected under 35 U.S.C. § 102(b) as being anticipated by either Weber or Glaug et al. Claim 12, as amended, is particularly directed to the provision of a garment having a wetness indicator for use as a toilet training aid.

The wetness indicator expands into a firm or rigid state when wet. More particularly, claim 12 is directed a garment for alerting a wearer to urination comprises:

an inner surface facing a wearer when wearing the garment, and a wetness indicator positioned relative to the inner surface for alerting the wearer when the inner surface becomes wet with liquid, said wetness indicator having a first stiffness when dry and a second stiffness greater than said first stiffness upon absorption of a preselected amount of liquid.

Claim 12 is unanticipated by and patentable over Weber or Glaug et al. in that each reference fails to show or suggest garment with a wetness indicator having a first stiffness when dry and a second stiffness greater than said first stiffness upon absorption of a preselected amount of liquid for alerting a wearer to urination.

Claim 12 is submitted as patentable over Weber and Glaug et al. for the same reasons given above for claim 1. Accordingly, claim 12 is not anticipated by the cited references and favorable consideration of claim 12 is respectfully requested. Claims 13-24 and 31, depending directly or indirectly from claim 12, are submitted as patentable over the cited reference for the same reasons.

In addition, claim 13 requires the wetness indicator to be positioned in the garment to press on the inner thighs. The longitudinally extending peaks 48 of Weber and the sponge 82 of Glaug et al. are not positioned to press on the inner thighs. Glaug et al. discloses that its sponge expands in thickness, not substantially in width. Therefore, Glaug et al. would appear to press against the crotch, not the inner thighs.

Claims 16-18 and 22-24 quantify the increase in stiffness of the saturated wetness indicator. These ranges are neither shown nor suggested by Weber or Glaug et al.

Claim 21 includes the same requirement discussed above for claim 29, and is submitted as patentable for the same additional reason as claim 29.

New claim 31, depending from claim 12, contains the additional limitation that the wetness indicator is generally elongate and is transversely positioned in a crotch region of the garment such that opposite ends of the elongate wetness indicator provide a tactile sensation to the inner thighs of the wearer. The cited art fails to teach or suggest a wetness indicator positioned in the crotch region in such an orientation. For this additional reason, claim 31 is patentable over the cited art.

New Claims 25-28

New claim 25 is directed to the provisions of an article for personal wear capable of alerting a wearer to the wearer's release of liquid body exudates. The article comprises a front region, a back region and a crotch region interconnecting the front and back regions and extending generally longitudinally therebetween, and a generally elongate wetness indicator positioned in said crotch region so as to come in contact with the liquid body exudates. The wetness indicator has a first stiffness when dry and a second stiffness greater than said first stiffness upon absorption of a preselected amount of the liquid body exudates and is positioned transversely in the crotch region such that opposite ends of the elongate wetness indicator provide a tactile sensation to the inner thighs of the wearer for alerting the wearer to the release of liquid body exudates.

When dry, the wetness indicator bends without perceptible resistance when subjected to force from the thighs. However, when wet, the wetness indicator becomes stiff, resisting the force applied by the thighs sufficiently to be tactiley perceived. The cited art fails to show or suggest this unique formation and orientation of a wetness indicator in an article for personal wear capable of alerting a wearer to the wearer's release of liquid body exudates. Accordingly, favorable consideration of claim 25 is requested.

Claims 26-28, depending from claim 25, are patentable for similar reasons. In addition, claim 27 is similar to claim 16 and is submitted as patentable for the same additional reason as claim 16. Claim 28 is similar to claim 29 and is submitted as patentable for the same additional reasons as claim 29.

VI. Conclusion

In view of the foregoing, reconsideration and prompt allowance of claims 1-31 is respectively requested. The Commissioner is hereby authorized to charge any fee deficiency or overpayment to Deposit Account No. 19-1345.

Respectfully submitted,



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CERTIFICATE OF MAILING

I certify that this Amendment A in the application of Christopher P. Olson, et al., Serial No. 10/038,863, filed December 31, 2001 is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on this 19th day of December, 2003.

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